

**TRANSGENIC ANIMALS AS URINARY BIOREACTORS FOR THE PRODUCTION  
OF POLYPEPTIDE IN THE URINE, RECOMBINANT DNA CONSTRUCT FOR  
KIDNEY-SPECIFIC EXPRESSION, AND METHOD OF USING SAME**

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**CROSS-REFERENCE TO RELATED APPLICATIONS**

The present application is a continuation-in-part of  
application 09/438,785, filed November 12, 1999, <sup>now abandoned,</sup> which claims  
priority under 35 U.S.C. §119(e) from U.S. provisional  
application 60/108,195, filed November 13, 1998, and U.S.  
provisional application 60/142,925, filed July 9, 1999, the  
entire contents of each of these prior applications are hereby  
incorporated by reference.

**BACKGROUND OF THE INVENTION**

Field of the Invention

The present invention relates to transgenic animals  
as urinary bioreactors for the expression and production of  
polypeptides in the urine. The present invention further  
relates to a recombinant DNA construct for kidney-specific  
expression of polypeptides in the urine and to a method for  
producing such polypeptides in the urine.

Description of the Related Art

Significant progress has recently been made in using  
transgenic animals as bioreactors to produce large quantity  
and high quality pharmaceuticals. The overall strategy  
entails the use of tissue-specific promoters to drive the  
expression of genes encoding medically important molecules.  
When those molecules are expressed in the target tissue of